

Amendments to the Claims:

1. (Previously presented) A haloaluminoxane composition wherein the halogen is fluorine, chlorine, or bromine, wherein the amount of halogen atoms present in said composition is in the range of about 0.5 mole % to about 10 mole % relative to aluminum atoms, and wherein said composition is formed from an aluminoxane and at least one halogenation agent.

2. (Previously presented) A haloaluminoxane composition wherein the halogen is fluorine, chlorine, and/or bromine, and wherein the amount of halogen atoms present in said composition is in the range of about 0.5 mole % to about 15 mole % relative to aluminum atoms, wherein said composition is formed from components comprising

(a) at least one aluminoxane and

(b) at least one halogenation agent which is

(i) at least one halohydrocarbon of the formula R_nCX_{4-n} , where $n = 1-3$, X is, independently, fluorine, chlorine or bromine, and where R is, independently, a hydrogen atom or a hydrocarbyl group having from one to about twenty carbon atoms;

or

(ii) at least one siloxane having at least one labile halogen atom in the molecule, wherein each halogen atom is, independently, fluorine, chlorine, or bromine;

or

(iii) at least one silane of the formula R'_nSiX_{4-n} , where $n = 1-3$, X is, independently, fluorine, chlorine or bromine, and where R' is, independently, a hydrocarbyl group having from one to about twenty carbon atoms,

or

(iv) at least one tin compound of the formula R'_nSnX_{4-n} , where $n = 1-3$, X is, independently, fluorine, chlorine or bromine, and where R' is, independently, a hydrocarbyl group having from one to about twenty carbon atoms;

or

(v) at least one hydrocarbyl aluminum halide of the formula R''_mAlX_{3-m} , where $m = 1$ or 2 , where X is, independently, fluorine, chlorine or bromine, and where R'' is, independently, a hydrocarbyl group having from one to about twenty carbon atoms;

or

(vi) mixtures of any two or more of (i)-(v).

3. (Previously presented) A composition according to Claim 1 wherein the amount of halogen atoms present in said composition is in the range of about 2 mole % to about 10 mole % relative to aluminum atoms.

4. (Previously presented) A composition according to Claim 2 wherein the halogen is fluorine.

5. (Original) A composition according to Claim 2 wherein (b) is at least one halohydrocarbon.

6. (Currently amended) A composition according to Claim 2 wherein the amount of halogen atoms present in said haloaluminum composition is a partially halogenated aluminum in the range of about 2 mole % to about 10 mole % relative to aluminum atoms.

7. (Original) A composition according to Claim 6 wherein (b) is at least one siloxane, silane, tin compound, or hydrocarbyl aluminum halide.

8. (Original) A composition according to Claim 2 wherein the hydrocarbyl groups of said aluminum are saturated, and have from one to about twenty carbon atoms.

9. (Original) A composition according to Claim 2 wherein said aluminum is methylaluminum, ethylaluminum, n-butylaluminum, or isobutylaluminum.

10. (Original) A composition according to Claim 5 wherein said halohydrocarbon is one in which at least one R is an aryl group.

11. (Original) A composition according to Claim 10 wherein said halohydrocarbon is α,α,α -trifluorotoluene.

12. (Original) A composition according to Claim 5 wherein said aluminum is methylaluminum, ethylaluminum, n-butylaluminum, or isobutylaluminum, and wherein said halohydrocarbon is one in which at least one R is an aryl group.

13. (Original) A composition according to Claim 5 wherein said aluminum is methylaluminum, ethylaluminum, n-butylaluminum, or isobutylaluminum, and wherein said halohydrocarbon is α,α,α -trifluorotoluene.

14. (Currently amended) A composition according to Claim 13 wherein the amount of halogen atoms present in said haloaluminumoxane is ~~an ionic haloaluminumoxane complex~~ in the range of about 2 mole % to about 10 mole % relative to aluminum atoms.

15. (Currently amended) A composition according to Claim 13 wherein the amount of halogen atoms present in said haloaluminumoxane is ~~a partially halogenated aluminumoxane~~ in the range of about 2 mole % to about 6 mole % relative to aluminum atoms.

16. (Original) A composition according to Claim 7 wherein said halogenation agent is a silane.

17. (Original) A composition according to Claim 7 wherein said halogenation agent is a silane, and wherein said silane is triphenylfluorosilane or trimethylfluorosilane.

18. (Original) A composition which comprises a haloaluminumoxane composition as in Claim 2 supported on a catalyst support or carrier.

19. (Original) A composition as in Claim 18 wherein said inorganic support or carrier is silica, alumina, or silica-alumina.

20. (Original) A composition according to Claim 18 wherein said aluminumoxane is methylaluminumoxane, ethylaluminumoxane, n-butylaluminumoxane, or isobutylaluminumoxane.

21. (Original) A composition according to Claim 18 wherein (b) is at least one haloalkyl, and wherein said haloalkyl is one in which at least one R is an aryl group.

22. (Original) A composition according to Claim 18 wherein said aluminumoxane is methylaluminumoxane, ethylaluminumoxane, n-butylaluminumoxane, or isobutylaluminumoxane, wherein (b) is at least one haloalkyl, and wherein said haloalkyl is one in which at least one R is an aryl group.

23. (Original) A composition according to Claim 22 wherein said haloalkyl is α,α,α -trifluorotoluene, and wherein said catalyst support or carrier is silica.

24. (Original) A composition according to Claim 7 wherein said aluminosiloxane is methylaluminosiloxane, ethylaluminosiloxane, n-butylaluminosiloxane, or isobutylaluminosiloxane; wherein said halogenation agent is a siloxane; and wherein said siloxane is a trisiloxane or a tricyclosiloxane.

25. (Original) A composition according to Claim 7 wherein said halogenation agent is a siloxane, and wherein said siloxane is 3,3,3-trifluoropropylheptamethyltrisiloxane, 3,3,3-trifluoropropylheptamethylcyclotrisiloxane, or poly[methyl(3,3,3-trifluoropropyl)siloxane].

26. (Original) A composition according to Claim 25 wherein said aluminosiloxane is methylaluminosiloxane, ethylaluminosiloxane, n-butylaluminosiloxane, or isobutylaluminosiloxane.

27. (Currently amended) A composition according to Claim 18 wherein the amount of halogen atoms present in said haloaluminosiloxane composition is a partially halogenated aluminosiloxane in the range of about 2 mole % to about 10 mole % relative to aluminum atoms.

28. (Original) A composition according to Claim 27 wherein said aluminosiloxane is methylaluminosiloxane, ethylaluminosiloxane, n-butylaluminosiloxane, or isobutylaluminosiloxane, and wherein said inorganic support or carrier is silica, alumina, or silica-alumina.

29. (Original) A composition according to Claim 27 wherein said aluminosiloxane is methylaluminosiloxane, ethylaluminosiloxane, n-butylaluminosiloxane, or isobutylaluminosiloxane; wherein said halogenation agent is a siloxane; and wherein said siloxane is a trisiloxane or a tricyclosiloxane.

30. (Original) A composition according to Claim 27 wherein said halogenation agent is a siloxane, and wherein said siloxane is 3,3,3-trifluoropropylheptamethyltrisiloxane, 3,3,3-trifluoropropylheptamethylcyclotrisiloxane, or poly[methyl(3,3,3-trifluoropropyl)siloxane].

31. (Original) A composition according to Claim 30 wherein said aluminosiloxane is methylaluminosiloxane, ethylaluminosiloxane, n-butylaluminosiloxane, or isobutylaluminosiloxane.

32. (Original) A composition according to Claim 27 wherein said aluminoxane is methylaluminoxane; wherein said halogenation agent is a siloxane, wherein said siloxane is poly[methyl(3,3,3-trifluoropropyl)siloxane], and wherein said support is silica.

33-58. (Cancelled)